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By Electronic Filing

June 7, 2019

Marlene H. Dortch, Secretary
Federal Communications Commission
445 Twelfth Street, S.W.
Washington, D.C. 20554

Re: *Alaska Communications Internet, LLC, Petition for Partial Waiver of Section 15.407(a)(3) of the Commission's Rules*, ET Docket No. 18-282

Dear Ms. Dortch:

On behalf of Alaska Communications Internet, LLC ("Alaska Communications"), and in response to requests from Jamison Prime and Hugh VanTuyl of the Office of Engineering and Technology, this letter provides additional information concerning the above-referenced waiver request.

First, Alaska Communications confirms that the specific RADWIN radios that it proposes to operate pursuant to the requested waiver of Section 15.407(a)(3) are as follows:

Model Number: RW-5BG5-0650
FCC ID: Q3K-BFJET5X
Fully Integrated Antenna

Each of these base station radios will be deployed so that they are aligned to one of the four cardinal compass points (azimuth 0, 90, 180, or 270). This model appears to be the same as the one evaluated in the Technical Statement attached as Appendix B to the RADWIN's recent Petition for Rulemaking on a similar topic.[1]

Second, Alaska Communications reiterates its urgent need for the Commission to grant this waiver so that it may quickly address customer complaints of degraded or, in some cases, interrupted Internet access service. During the winter months, with the base station radios set to power levels that comply with Section 15.407(a)(3), Alaska Communications' customers were able to receive a sufficiently strong signal to support usable fixed wireless broadband Internet access service. With the changing of the seasons, emerging spring and summer foliage is now interfering to a much greater degree with those wireless connections. Alaska Communications is now hearing complaints from affected customers that their broadband connections are slow (or,

[1] *RADWIN Ltd. Amendment of Part 15 of the Commission's Rules to Advance Improved Broadband Services in the U-NII-1 and U-NII-3 Bands*, Petition for Rulemaking, RM No. 11812 (filed June 18, 2018) ("RADWIN Petition"), Appendix B, at 1.

in some cases, not working at all). Field analysis reveals this is the direct result of the seasonal increase in foliage density. Alaska Communications expects the number and severity of these complaints to continue to increase as the foliage grows thicker through the coming summer months.

Other than this waiver, Alaska Communications has identified no technically and economically feasible solution that could restore service quickly to the affected customers. Having considered options such as deploying temporary substitute radios using the 3.65 GHz band or increasing the height of the towers on which the radios are mounted, the company has concluded that either of these would require a lengthy service disruption, and that the cost could not be met while maintaining its current monthly charge for broadband Internet access service.

Third, Alaska Communications believes that, given the well-recognized array of unique challenges to deploying broadband in Alaska, a grant of this waiver would in no way limit or prejudice the Commission's ongoing consideration of the RADWIN Petition for Rulemaking, seeking nationwide changes to the power limits in Section 15.407(a)(3). Quite simply, no other state in the nation faces the problem of connecting so many locations separated by such great vacant distances, forbidding climate, and physical barriers. As the Commission has already recognized in considering broadband deployment policy, "Alaska faces uniquely challenging operating conditions, and . . . national solutions may require modification to serve the public interest in Alaska."[2] It is therefore "important to ensure our approach is flexible enough to take into account the unique conditions in places like Alaska . . . , such as its remoteness, lack of roads, challenges and costs associated with transporting fuel, lack of scalability per community, satellite and backhaul availability, extreme weather conditions, challenging topography, and short construction season."[3]

Among other factors present to unique degree in Alaska:

- Sites in Alaska's remote communities may lack basic infrastructure. Remote rural and Bush communities in Alaska are geographically isolated and, in many cases, lack access to infrastructure resources commonly available elsewhere. Most Bush communities cannot be accessed by road, nor are they connected to the state's power grid. To reach these communities, people, as well as goods and services, must arrive by plane, barge, snow machine, all-terrain vehicle, or other off-road transportation means. Communications services in these communities generally must rely on satellite or terrestrial point-to-point microwave transport links to Anchorage, Fairbanks, or Juneau. Even on-road rural communities, such as those that Alaska Communications proposes to serve using this waiver, frequently have few towers on

[2] *Connect America Fund*, WC Docket No. 10-90, Report and Order and Further Notice of Proposed Rulemaking, FCC 11-161, 26 FCC Rcd 17663 (2011) ("*Transformation Order*"), at ¶ 507.

[3] *Id.* at ¶ 508. *See also, id.*at ¶ 101 (adopting special performance standards for areas with no terrestrial backhaul), ¶ 193 (recognizing that Alaska faces uniquely challenging operating conditions, and national solutions may require modification to serve the public interest in Alaska, including freezing support for price cap carriers in non-CONUS areas including Alaska, ¶ 481 (creating the Tribal Mobility Fund).

which to mount broadband equipment, and deployment of new towers is infeasible, given the high mobilization and demobilization costs of construction in remote locations, the additional cost of extending utility service to reach new sites, and the small number of customers that can be served from a given tower location under existing U-NII-3 power restrictions.

- Lowest-in-the-nation population density. Alaska has a population of about 740,000 people, only slightly greater than that of the District of Columbia, yet the state encompasses about 1/6 of the total land area of the nation, larger than the area of 22 other states combined. This gives Alaska a lowest-in-the-nation population density of 1.2 persons per square mile statewide.[4] Of that total, however, about 300,000 people – some 40 percent of the state's population – live in Anchorage.[5] Outside of Anchorage, therefore, Alaska's population density falls precipitously to far fewer than one person per square mile. It is logistically and economically prohibitive to deploy wireline broadband facilities in these small, remote communities, given the small number of customers among which to spread the cost.

- Forbidding climate and short construction season. Construction of broadband infrastructure in Alaska may be reliably possible for as few as three to four months each year. Outside of that "construction season," even routine maintenance and repair tasks are possible only intermittently, and may require a costly, multi-day commitment of personnel to travel by air, barge, ATV, or snow machine to the site of the trouble. Travel is frequently slowed or interrupted by adverse weather conditions, further delaying and raising the cost and hazard of such activities. Because of the logistical challenges and compliance requirements, planning begins months in advance of the construction season itself, often in the preceding autumn. In this case, it is too late to plan, obtain permits and equipment, and construct additional towers in the areas covered by this waiver request during the current 2019 construction season, and economically prohibitive in any event.

Fourth, the small number and sparse distribution of customers to be served by these radios, coupled with a dearth of available towers, creates a uniquely low risk of harmful interference in the areas of Alaska covered by this waiver request. Alaska Communications found it necessary to seek this waiver because there are no other suitable towers available and because, as discussed above, it is impossible to build new to serve the small number of customers

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[4] *See* United States Census Bureau, State Area Measurements and Internal Point Coordinates, *available at:* https://www.census.gov/geographies/reference-files/2010/geo/state-area.html (visited June 7, 2018) (showing the area of Alaska is greater than that of North Carolina, New York, Mississippi, Pennsylvania, Louisiana, Tennessee, Ohio, Virginia, Kentucky, Indiana, Maine, South Carolina, West Virginia, Maryland, Vermont, New Hampshire, Massachusetts, New Jersey, Hawaii, Connecticut, Delaware, Rhode Island – and the District of Columbia – combined).

[5] *See* United States Census Bureau, Quick Facts, *available at:* https://www.census.gov/quickfacts/fact/table/DC,anchoragemunicipalityalaska,AK/PST045218 (visited June 7, 2019) (showing District of Columbia, Municipality of Anchorage, and Alaska state totals).

in the area. Those facts also mean that there are no other nearby towers on which other providers might locate similar equipment. Indeed, as explained in Alaska Communications' reply comments in this proceeding, the towers Alaska Communications is using near Chena Hot Springs are at least 30 miles from the central Fairbanks service area targeted by AlasConnect, which was the only party to express (unfounded) concern about the potential impact of this waiver on its outdoor fixed wireless services.[6]

For all of these reasons, the Commission has explained that Alaska Communications and other "price cap carriers serving specific non-contiguous areas of the United States – Alaska, Hawaii, Puerto Rico, the U.S. Virgin Islands, and the Northern Marianas Islands – face different operating conditions and challenges from those faced by carriers in the contiguous 48 states."[7] The Commission has thus created unique broadband deployment obligations for Alaska carriers in order to "account for the distinctive geographic and climate challenges of building and providing voice and broadband service in Alaska."[8]

This waiver request is one manifestation of the need to adapt the Commission's policies to accommodate unique deployment and operating challenges in Alaska. Some of the factors discussed here may individually be present in areas of the lower 48 states but, taken together, they conspire to create a uniquely challenging environment for broadband deployment in Alaska. As explained above, only through a grant of this waiver may Alaska Communications overcome these challenges to preserve service to its existing broadband customers served by fixed wireless, and extend the service to new customers.

Please direct any questions regarding this matter to me.

Very truly yours,

Digitally signed by Richard R. Cameron
Date: 2019.06.07 17:31:44 -04'00'

Richard R. Cameron
Counsel to Alaska Communications

cc: Aspasia Paroutsas
Jamison Prime
Karen Rackley
Michael Ha
Hugh VanTuyl

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6 *See Alaska Communications Internet, LLC, Petition for Partial Waiver of Section 15.407(a)(3) of the Commission's Rules*, ET Docket No. 18-282, Reply Comments of Alaska Communications (filed Nov. 6, 2018), at 6.

7 *Connect America Fund*, WC Docket No. 10-90, Order, FCC 16-143, 31 FCC Rcd 12086 (2016), at ¶ 3.

8 *Id.* at ¶ 8; *see also Connect America Fund*, WC Docket No. 10-90, Report & Order and Further Notice of Proposed Rulemaking, FCC 16-115, 31 FCC Rcd 10139 (2016), at ¶ 1 (Commission policy must accommodate the "unique climate and geographic conditions of Alaska").